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TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS 1		Web Page for STN Seminar Schedule - N. America
NEWS 2	NOV 21	CAS patent coverage to include exemplified prophetic substances identified in English-, French-, German-, and Japanese-language basic patents from 2004-present
NEWS 3	NOV 26	MARPAT enhanced with FSORT command
NEWS 4	NOV 26	CHEMSAFE now available on STN Easy
NEWS 5	NOV 26	Two new SET commands increase convenience of STN searching
NEWS 6	DEC 01	ChemPort single article sales feature unavailable
NEWS 7	DEC 12	GBFULL now offers single source for full-text coverage of complete UK patent families
NEWS 8	DEC 17	Fifty-one pharmaceutical ingredients added to PS
NEWS 9	JAN 06	The retention policy for unread STNmail messages will change in 2009 for STN-Columbus and STN-Tokyo
NEWS 10	JAN 07	WPIDS, WPINDEX, and WPIX enhanced Japanese Patent Classification Data
NEWS 11	FEB 02	Simultaneous left and right truncation (SLART) added for CERAB, COMPUAB, ELCOM, and SOLIDSTATE
NEWS 12	FEB 02	GENBANK enhanced with SET PLURALS and SET SPELLING
NEWS 13	FEB 06	Patent sequence location (PSL) data added to USGENE
NEWS 14	FEB 10	COMPENDEX reloaded and enhanced
NEWS 15	FEB 11	WTEXTILES reloaded and enhanced
NEWS 16	FEB 19	New patent-examiner citations in 300,000 CA/CAplus patent records provide insights into related prior art
NEWS 17	FEB 19	Increase the precision of your patent queries -- use terms from the IPC Thesaurus, Version 2009.01
NEWS 18	FEB 23	Several formats for image display and print options discontinued in USPATFULL and USPAT2
NEWS 19	FEB 23	MEDLINE now offers more precise author group fields and 2009 MeSH terms
NEWS 20	FEB 23	TOXCENTER updates mirror those of MEDLINE - more precise author group fields and 2009 MeSH terms
NEWS 21	FEB 23	Three million new patent records blast AEROSPACE into STN patent clusters
NEWS 22	FEB 25	USGENE enhanced with patent family and legal status display data from INPADOCDB
NEWS 23	MAR 06	INPADOCDB and INPAFAMDB enhanced with new display formats
NEWS 24	MAR 11	EPFULL backfile enhanced with additional full-text applications and grants
NEWS 25	MAR 11	ESBIOBASE reloaded and enhanced
NEWS 26	MAR 20	CAS databases on STN enhanced with new super role for nanomaterial substances
NEWS 27	MAR 23	CA/CAplus enhanced with more than 250,000 patent

equivalents from China

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

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NEWS IPC8 For general information regarding STN implementation of IPC 8

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* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 17:25:54 ON 27 MAR 2009

=> file reg
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 0.22 0.22

FILE 'REGISTRY' ENTERED AT 17:26:11 ON 27 MAR 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 26 MAR 2009 HIGHEST RN 1127762-87-1
DICTIONARY FILE UPDATES: 26 MAR 2009 HIGHEST RN 1127762-87-1

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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading A:\10.591172.R1.Sekine et al.,SRNT.CAPLUS..str

L1 STRUCTURE UPLOADED

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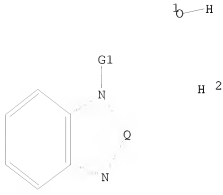
L1 HAS NO ANSWERS
L1 STR



G1 [@1],[@2]

Structure attributes must be viewed using STN Express query preparation.

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  2.2% PROCESSED     2000 ITERATIONS                                 9 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

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                        BATCH   **INCOMPLETE**
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PROJECTED ANSWERS:            7010 TO     9442

L2            9 SEA SSS SAM L1

=> d l2

L2   ANSWER 1 OF 9  REGISTRY  COPYRIGHT 2009 ACS on STN
RN   1090486-89-7  REGISTRY
ED   Entered STN:  26 Dec 2008
CN   1H-Benzotriazole-6-carboxamide, N-cyclopentyl-  (CA INDEX NAME)
MF   C12 H14 N4 O
SR   Chemical Library
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LC   STN Files:   CHEMCATS
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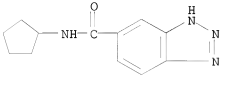

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.07

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PROJECTED ANSWERS:            7626 TO     8158

L3         4331 SEA SSS FUL L1

=> file caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   188.89     189.11

FILE 'CAPLUS' ENTERED AT 17:27:41 ON 27 MAR 2009
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FILE COVERS 1907 - 27 Mar 2009  VOL 150 ISS 14
FILE LAST UPDATED: 26 Mar 2009  (20090326/ED)

Caplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> d his

     (FILE 'HOME' ENTERED AT 17:25:54 ON 27 MAR 2009)

     FILE 'REGISTRY' ENTERED AT 17:26:11 ON 27 MAR 2009
L1             STRUCTURE UPLOADED
L2             9 S L1 SSS SAM
L3          4331 S L1 SSS FULL

     FILE 'CAPLUS' ENTERED AT 17:27:41 ON 27 MAR 2009

=> s l3
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L4          763 L3

=> s l4 and phosphoramidit?
          4017 PHOSPHORAMIDIT?
L5            3 L4 AND PHOSPHORAMIDIT?

=> d l5 ed ibib abs hitstr 1-3

L5   ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2009 ACS on STN
ED   Entered STN:  07 Feb 2008
ACCESSION NUMBER:          2008:157070  CAPLUS
DOCUMENT NUMBER:           148:239456
TITLE:                     Method for introducing 2-cyanoethoxymethyl
                           nucleic-acid-protecting group at 2'-hydroxy group of
                           nucleic acid
INVENTOR(S):               Kitagawa, Hidetoshi; Uetake, Kouichi
PATENT ASSIGNEE(S):        Nippon Shinyaku Co., Ltd., Japan
SOURCE:                    PCT Int. Appl., 57pp.
                           CODEN: PIXXD2
DOCUMENT TYPE:             Patent
LANGUAGE:                  Japanese
FAMILY ACC. NUM. COUNT:    1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.          DATE
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             CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI,
             GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG,
             KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,
             MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL,
             PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN,
             TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW,
             GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
             BY, KG, KZ, MD, RU, TJ, TM
PRIORITY APPLN. INFO.:                          JP 2006-210439      A  20060802
OTHER SOURCE(S):           MARPAT 148:239456
GI
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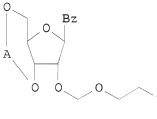

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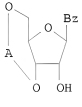

II

AB The object is to provide a method for introducing a substituent CH2OCH2CH2WG1 (WG1 = an electron-attracting group) into a 2'-hydroxyl group of a ribose moiety in a RNA derivative having a 3'-hydroxyl group and a 5'-hydroxyl group each protected by a silicon protecting group, in a

simple manner and at a low cost. Specifically, a method for producing a RNA derivative represented by the general formula (I; Bz = a nucleotide which may have a protecting group; WG1 = an electron-attracting group; R3 = alkyl or aryl; A = a silicon substituent) comprises reacting a RNA derivative represented by the general formula (II; Bz, A = same as above) with a monothioacetal compound represented by the general formula R3SCH2OCH2CH2WG1 (III) wherein iodine is used as a reagent for the halogenation of a sulfur atom in the monothioacetal compound III in the presence of an acid. 2'-(2-Cyanoethoxymethyl)nucleosides I can be further converted into 2'-(2-cyanoethoxymethyl)ribonucleoside 3'-phosphoramidites. Thus, 50.6 g 3',5'-O-(tetraisopropyldisiloxan-1,3-diyl)uridine was dissolved in 104 mL THF, followed by adding 0.76 mL MeSO3H, 158 g I, and 16.4 g methylthiomethyl 2-cyanoethyl ether at 0°, and the resulting mixture was allowed to react for 45 min, treated with saturated aqueous NaHCO3 solution and saturated sodium thiosulfate solution, extracted with EtOAc to give, after workup and concentration under reduced pressure, crude 3',5'-O-(tetraisopropyldisiloxan-1,3-diyl)-2'-O-(2-cyanoethoxymethyl)uridine (IV). IV was treated with 300 mL MeOH and then with 11.6 g ammonium fluoride under stirring, and stirred at 50° for 7.5 h, followed by treatment with MeCN, filtration, and washing the filtrate with hexane, and concentration under reduced pressure to give 21.5 g 2'-O-(2-cyanoethoxymethyl)uridine (63%).

IT 735279-59-1, Benzotriazole triflate
RL: RGT (Reagent); RACT (Reactant or reagent)
(method for introducing 2-cyanoethoxymethyl protecting group at 2'-hydroxy group of ribonucleosides by etherification with methylthiomethyl cyanoethyl ether and iodine in presence of acid)

RN 735279-59-1 CAPLUS

CN Methanesulfonic acid, 1,1,1-trifluoro-, compd. with 1H-benzotriazole (1:1) (CA INDEX NAME)

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CRN 1493-13-6
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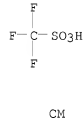
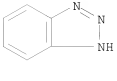


CM 2

CRN 95-14-7
CMF C6 H5 N3



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS

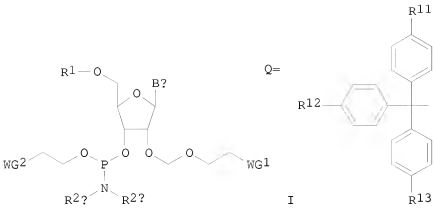
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN
ED Entered STN: 03 Mar 2006
ACCESSION NUMBER: 2006:193342 CAPLUS
DOCUMENT NUMBER: 144:274495
TITLE: Preparation of nucleoside phosphoramidite compounds and method for producing oligo-RNA
INVENTOR(S): Ohgi, Tadaaki; Ishiyama, Kouichi; Masutomi, Yutaka
PATENT ASSIGNEE(S): Nippon Shinyaku Co., Ltd., Japan
SOURCE: PCT Int. Appl., 70 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006022323	A1	20060302	WO 2005-JP15420	20050825
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
AU 2005275801	A2	20060302	AU 2005-275801	20050825
AU 2005275801	A1	20060302		
CA 2577922	A1	20060302	CA 2005-2577922	20050825
EP 1795536	A1	20070613	EP 2005-780944	20050825
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				
CN 101048423	A	20071003	CN 2005-80036373	20050825
BR 2005014644	A	20080617	BR 2005-14644	20050825
MX 2007002245	A	20070420	MX 2007-2245	20070223
IN 2007CN00811	A	20070824	IN 2007-CN811	20070226
KR 2007054688	A	20070529	KR 2007-706676	20070323
US 20070282097	A1	20071206	US 2007-574308	20070803

PRIORITY APPLN. INFO.:	JP 2004-246185	A	20040826
	JP 2005-110817	A	20050407
	JP 2005-193313	A	20050701
	WO 2005-JP15420	W	20050825

OTHER SOURCE(S): MARPAT 144:274495
GI



AB Disclosed is a novel phosphoramidite compound which is useful for synthesis of an oligo-RNA. Nucleoside phosphoramidite compds. represented by the following general formula (I) [Bx represents a nucleic acid base which may have a protecting group; R1 represents a substituent represented by the following general formula Q (wherein R11, R12 and R13 may be the same or different and resp. represent a hydrogen or an alkoxy); R2a and R2b may be the same or different and resp. represent an alkyl or form a 5-6 membered saturated amino ring group together with an adjacent nitrogen atom, and the saturated amino ring group may have an oxygen atom or a sulfur atom as a ring-forming atom other than the nitrogen atom; WG1 and WG2 may be the same or different and resp. represent an electron-withdrawing group] are prepared These nucleoside phosphoramidites having ether protecting groups 2'-hydroxy protecting group with straight chain-substituents are not sterically hindered around the phosphorus atom linked to the 3-hydroxy group and allow the condensation reaction to proceed in a very short period of time in good yields and give oligo-RNA of high purity by using almost the same method for the preparation of oligo-DNA. Thus, 546 mg 5'-O-(4,4'-Dimethoxytrityl)uridine was dissolved in 4 mL 1,2-dichloroethane, treated with 452 mg diisopropylethylamine and then with 365 mg dibutyltin dichloride, allowed to react at room temperature for 1 h,

heated to 80°, treated dropwise with 144.4 mg chloromethyl 2-cyanoethyl ether, and stirred for 30 min to give, after workup and silica gel chromatog., 34% 5'-O-(4,4'-dimethoxytrityl)-2'-O-(2-cyanoethoxymethyl)uridine (II). II (209 mg) and 23 mg tetrazole were dissolved in 2 mL MeCN, treated dropwise with 150 mg 2-Cyanoethyl N,N,N,N'-tetraisopropylphosphorodiamidite, stirred at 45° for 1.5 h to give, after workup and silica gel chromatog., 5'-O-(4,4'-dimethoxytrityl)-2'-O-(2-cyanoethoxymethyl)uridine 3'-O-(2-cyanoethyl N,N-diisopropylphosphoramidite). Similarly, N4-acetyl-5'-O-(4,4'-dimethoxytrityl)-2'-O-(2-cyanoethoxymethyl)cytidine 3'-O-(2-cyanoethyl N,N-diisopropylphosphoramidite), N2-acetyl-5'-O-(4,4'-dimethoxytrityl)-2'-O-(2-cyanoethoxymethyl)guanosine 3'-O-(2-cyanoethyl N,N-diisopropylphosphoramidite), N2-phenoxyacetyl-5'-O-(4,4'-dimethoxytrityl)-2'-O-(2-cyanoethoxymethyl)guanosine 3'-O-(2-cyanoethyl N,N-diisopropylphosphoramidite), and N6-acetyl-5'-O-(4,4'-dimethoxytrityl)-2'-O-(2-cyanoethoxymethyl)adenosine 3'-O-(2-cyanoethyl N,N-diisopropylphosphoramidite) were prepared These nucleoside phosphoramidites were used to prepare RNAs by the phosphoramidite solid-phase method.

IT 735279-59-1

RL: RGT (Reagent); RACT (Reactant or reagent)

(preparation of phosphoramidite compound and method for producing oligo-RNA)

RN 735279-59-1 CAPLUS

CN Methanesulfonic acid, 1,1,1-trifluoro-, compd. with 1H-benzotriazole (1:1) (CA INDEX NAME)

CM 1

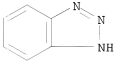
CRN 1493-13-6

CMF C H F3 O3 S

CM 2

CRN 95-14-7

CMF C6 H5 N3



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN

ED Entered STN: 04 Mar 2005

ACCESSION NUMBER: 2005:182910 CAPLUS

DOCUMENT NUMBER: 142:274986

TITLE: SERRS beacon dual labeled oligonucleotide probes for nucleic acid sequence identification and diagnostic applications

INVENTOR(S): Graham, Duncan; Smith, William Ewen; Fruk, Ljiljana

PATENT ASSIGNEE(S): University of Strathclyde, UK

SOURCE: PCT Int. Appl., 70 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005019812	A1	20050303	WO 2004-GB3671	20040826

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RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1658488 A1 20060524 EP 2004-768226 20040826

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

JP 2007503581 T 20070222 JP 2006-524420 20040826

US 20060246460 A1 20061102 US 2006-569698 20060525

PRIORITY APPLN. INFO.: GB 2003-19949 A 20030826

WO 2004-GB3671 W 20040826

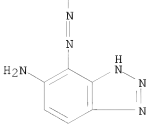
OTHER SOURCE(S): MARPAT 142:274986

AB The present invention relates to methods and materials for detecting or identifying particular nucleic acid sequences in a sample using modified mol. beacons. The invention provides modified mol. beacons detectable by surface enhanced Raman spectroscopy (SERS) (SERRS Beacons) and related materials, processes, and methods of use. The SERRS Beacon is a dual labeled probe with a different dye at each of its two ends. In conventional Beacons a quencher such as DABCYL is used with a dye. In the present invention, one of the dyes is specifically designed such that it is capable of immobilizing the oligonucleotide probe onto an appropriate metal surface. In use, the SERRS Beacon is immobilized in the "closed state" on the metal surface, and this has the effect that due to the closeness to the surface of the colored species a SERRS spectrum corresponding to both dyes is detectable. When the complementary sequence hybridizes, the SERRS Beacon opens up and one of the dyes is removed from the surface - this causes the SERRS signals to change to show only the dye on the surface, not the other dye. The wide combination of different dyes offers a massive coding potential for simultaneous multiplexed anal. of DNA/RNA sequences. The method can be used for diagnosis or prognosis of a disease, or for gene expression profiling.

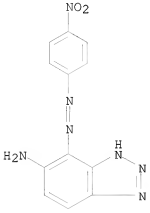
IT 797043-51-7 797043-55-1 797043-56-2
797043-57-3 797043-60-8 847145-55-5
847145-56-6
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(quencher dye; SERRS beacon dual labeled oligonucleotide probes for nucleic acid sequence identification and diagnostic applications)

RN 797043-51-7 CAPLUS

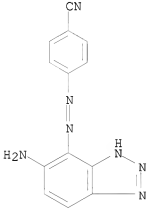
CN 1H-Benzotriazol-6-amine, 7-[2-(2,4-dimethoxyphenyl)diazenyl]- (CA INDEX NAME)



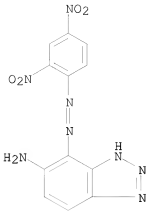
RN 797043-55-1 CAPLUS
CN 1H-Benzotriazol-6-amine, 7-[2-(4-nitrophenyl)diazenyl]- (CA INDEX NAME)



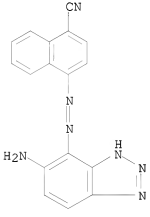
RN 797043-56-2 CAPLUS
CN Benzonitrile, 4-[2-(6-amino-1H-benzotriazol-7-yl)diazenyl]- (CA INDEX NAME)



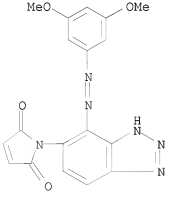
RN 797043-57-3 CAPLUS
CN 1H-Benzotriazol-6-amine, 7-[2-(2,4-dinitrophenyl)diazenyl]- (CA INDEX NAME)



RN 797043-60-8 CAPLUS
CN 1-Naphthalenecarbonitrile, 4-[2-(6-amino-1H-benzotriazol-7-yl)diazenyl]-
(CA INDEX NAME)

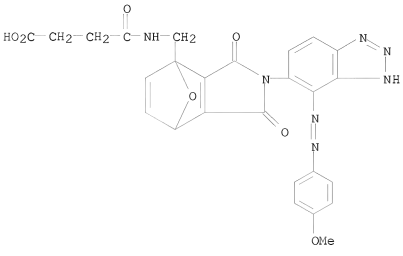


RN 847145-55-5 CAPLUS
CN 1H-Pyrrole-2,5-dione, 1-[7-[2-(3,5-dimethoxyphenyl)diazenyl]-1H-
benzotriazol-6-yl]- (CA INDEX NAME)

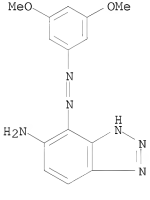


RN 847145-56-6 CAPLUS

CN Butanoic acid, 4-oxo-4-[[[2,3,4,7-tetrahydro-2-[7-[2-(4-methoxyphenyl)diazenyl]-1H-benzotriazol-6-yl]-1,3-dioxo-4,7-epoxy-1H-isoindol-4-yl]methyl]amino]- (CA INDEX NAME)



IT 797043-52-8P
RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(quencher dye; SERRS beacon dual labeled oligonucleotide probes for nucleic acid sequence identification and diagnostic applications)
RN 797043-52-8 CAPLUS
CN 1H-Benzotriazol-6-amine, 7-[2-(3,5-dimethoxyphenyl)diazenyl]- (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s hydroxybenzotriazole-1-ol
3848 HYDROXYBENZOTRIAZOLE
10069266 1
133039 OL
L6 0 HYDROXYBENZOTRIAZOLE-1-OL
(HYDROXYBENZOTRIAZOLE(W)1(W)OL)

=> s hydroxybenzotriazole

```
L7        3848 HYDROXYBENZOTRIAZOLE

=> s l7 and phosphoramidit?
         4017 PHOSPHORAMIDIT?
L8          14 L7 AND PHOSPHORAMIDIT?

=> d l8 ed ibib abs hitstr

L8   ANSWER 1 OF 14  CAPLUS  COPYRIGHT 2009 ACS on STN
ED   Entered STN:  09 Sep 2005
ACCESSION NUMBER:          2005:984074  CAPLUS
DOCUMENT NUMBER:           143:286633
TITLE:                     Novel method of synthesizing nucleic acid without
                           protecting nucleotide bases
INVENTOR(S):               Sekine, Mitsuo; Seio, Kohji; Ohkubo, Akihiro
PATENT ASSIGNEE(S):        Japan Science and Technology Agency, Japan
SOURCE:                    PCT Int. Appl., 13 pp.
                           CODEN: PIXXD2
DOCUMENT TYPE:             Patent
LANGUAGE:                  Japanese
FAMILY ACC. NUM. COUNT:    1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
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     WO 2005082923        A1    20050909    WO 2005-JP3053         20050224
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM,
             SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
             RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
             MR, NE, SN, TD, TG
     CA 2558581           A1    20050909    CA 2005-2558581        20050224
     EP 1721908           A1    20061115    EP 2005-710654         20050224
         R:  DE, FR, GB
PRIORITY APPLN. INFO.:                      JP 2004-56707       A  20040301
                                            WO 2005-JP3053      W  20050224
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AB It is intended to provide a novel method of synthesizing a nucleic acid oligomer whereby at least 10-mer of nucleic acid mol. oligomer (for example, a 20-mer) can be synthesized at an extremely high purity by the phosphoramidite solid phase method without protecting nucleotide bases, compared with the conventional method without nucleotide base protection allowing the synthesis of a 12-mer at the highest. Namely, a method of synthesizing a nucleic acid oligomer is characterized in that an alc. type activator or a combination of an alc. type activator with an acid catalyst is used in the phosphoramidite method. The alc. type activator is a compound capable of forming active phosphite intermediate, e.g. hydroxybenzotriazole (HOBt), its derivative, or phenols, but not aliphatic hydrocarbon alc. DNA oligomers are useful in high throughput preparation of DNA chips for gene diagnosis using single nucleotide polymorphisms (SNP) anal. (no data). Thus, d[CCCCCTTTTCTCTCTCTCT] was prepared by the solid phase method using an Applied Biosystems DNA/RNA synthesizer 392, thymidine-linked to polymer support through a succinyl linker, 5'-4,4'-dimethoxytrityl-nucleoside 3'-phosphoramidite, 6-trifluoromethylbenzotriazol-1-ol (alc. type activator), and benzimidazolium triflate (catalyst).

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REFERENCE COUNT:          11    THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT


=> d his

     (FILE 'HOME' ENTERED AT 17:25:54 ON 27 MAR 2009)

     FILE 'REGISTRY' ENTERED AT 17:26:11 ON 27 MAR 2009
L1             STRUCTURE UPLOADED
L2               9 S L1 SSS SAM
L3            4331 S L1 SSS FULL

     FILE 'CAPLUS' ENTERED AT 17:27:41 ON 27 MAR 2009
L4             763 S L3
L5               3 S L4 AND PHOSPHORAMIDIT?
L6               0 S HYDROXYBENZOTRIAZOLE-1-OL
L7            3848 S HYDROXYBENZOTRIAZOLE
L8              14 S L7 AND PHOSPHORAMIDIT?

=> d l8 ed ibib abs hitstr 2-14

L8   ANSWER 2 OF 14  CAPLUS  COPYRIGHT 2009 ACS on STN
ED   Entered STN:  11 Feb 2005
ACCESSION NUMBER:         2005:120077  CAPLUS
DOCUMENT NUMBER:          142:198303
TITLE:                    Solid-phase preparation of asymmetric pyrophosphoric
                          acid esters
INVENTOR(S):              Sekine, Mitsuo; Seio, Yasushi; Okubo, Akihiro
PATENT ASSIGNEE(S):       Japan Science and Technology Agency, Japan
SOURCE:                   Jpn. Kokai Tokkyo Koho, 11 pp.
                          CODEN: JKXXAF
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
     --------------      ----   --------    -------------------     --------
     JP 2005035912        A     20050210    JP 2003-198932          20030718
PRIORITY APPLN. INFO.:                     JP 2003-198932          20030718
OTHER SOURCE(S):          MARPAT 142:198303
AB   R1OP(O)O(O-)O(O-)P(O)OR8 (1; R1, R8 = ester residue) were prepared by
     condensation of R1O(R2R3N)POPG (R1 = ester residue; R2, R3 = alkyl, aryl;
     PG = protective group) with HOP(O)(O-)OR4 (R4 = ester residue bound to
     solid phase) in the presence of 1-hydroxybenzotriazole and
     derivs., followed by deprotection, and finally separation from solid phases.
     Preparation of 1 (R1 = thymidin-5'-yl, R8 = thymidin-3'-yl) using a polystyrene
     support was exemplified.

L8   ANSWER 3 OF 14  CAPLUS  COPYRIGHT 2009 ACS on STN
ED   Entered STN:  17 Aug 2004
ACCESSION NUMBER:         2004:667674  CAPLUS
DOCUMENT NUMBER:          141:332407
TITLE:                    O-Selectivity and Utility of Phosphorylation Mediated
                          by Phosphite Triester Intermediates in the
                          N-Unprotected Phosphoramidite Method
AUTHOR(S):                Ohkubo, Akihiro; Ezawa, Yusuke; Seio, Kohji; Sekine,
                          Mitsuo
CORPORATE SOURCE:         Department of Life Science, Tokyo Institute of
                          Technology, Yokohama, 226-8501, Japan
```
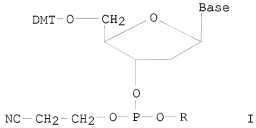

SOURCE: Journal of the American Chemical Society (2004), 126(35), 10884-10896
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:332407
GI



I

AB Previously, O-selective phosphorylation on polymer supports in the N-unprotected phosphoramidite method could not be carried out because the amino groups of dA and dC have high reactivity toward tervalent phosphorus(III)-type phosphitylating reagents. In this paper, we developed a new coupling strategy named the "activated phosphite method" in which the phosphitylation is mediated by phosphite triester intermediates [(I): Base = A, C, G, or T; DMT = 4,4'-dimethoxytrityl; R = 1-benzotriazolyl (Bt); 6-trifluoromethyl-Bt; 6-nitro-Bt; 4-nitro-6-trifluoromethyl-Bt; 2,4-dinitrobenzene]. Application of 1-hydroxybenzotriazole as the promoter to the solid-phase synthesis resulted in excellent O-selectivity of more than 99.7%. This O-selectivity was explained by the frontier MO interactions between the reactive intermediates and the nucleophiles such as the amino or hydroxyl groups of nucleosides. Furthermore, longer oligonucleotides were synthesized not only by a manual operation but also by a DNA synthesizer. The utility of our new method was demonstrated by the successful synthesis of a base-labile modified oligodeoxyribonucleotide having 4-N-acetyldeoxycytidine residues. Finally, DNA 20-mers containing dA or dC could be synthesized in good yields by use of a combined reagent of 6-trifluoromethyl-1-hydroxybenzotriazole and benzimidazolium triflate.

REFERENCE COUNT: 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN
ED Entered STN: 05 Jul 2004
ACCESSION NUMBER: 2004:536391 CAPLUS
DOCUMENT NUMBER: 142:280376
TITLE: Alternate synthesis pathways for preparing Fmoc-trinucleoside-phosphoramidites
AUTHOR(S): Yanez, Jorge; Soberon, Xavier; Gaytan, Paul
CORPORATE SOURCE: Instituto de Biotecnologia, Universidad Nacional Autonoma de Mexico, Morelos, 62271, Mex.
SOURCE: Revista de la Sociedad Quimica de Mexico (2004), 48(1), 26-37
CODEN: RSQMAN; ISSN: 0583-7693
PUBLISHER: Sociedad Quimica de Mexico
DOCUMENT TYPE: Journal
LANGUAGE: Spanish

OTHER SOURCE(S): CASREACT 142:280376

AB Fmoc-trinucleoside-diphosphate phosphoramidites (Fmoc is fluorenylmethoxycarbonyl) are mols. composed of three nucleosides and have application as mutagenic units during automated synthesis of oligonucleotides. These synthons afford substitution of wild-type codons by complete mutant codons in a specific region of the target gene, avoiding at the protein level, the bias toward certain kind of amino acids that is generated with conventional methods of mutagenesis. In the present work, three organic synthesis pathways were explored for the preparation of such valuable compds., setting as main goal the achievement of clean, one-pot internucleotidic reactions that enable the easy purification of the target compound by column chromatog. Syntheses were performed in liquid-phase and gram-scales through the phosphotriester method. The best pathway for the preparation of dinucleotides and trinucleotides made use of 2-chlorophenyl-O,O-bis(1-hydroxybenzotriazoly)phosphate as phosphorylating reagent.

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN
ED Entered STN: 02 Apr 2004
ACCESSION NUMBER: 2004:271525 CAPLUS
DOCUMENT NUMBER: 140:304029
TITLE: Preparation of oligonucleotides from nucleosides and/or nucleotides having unprotected base groups
INVENTOR(S): Sekine, Mitsuo; Okubo, Akihiro; Seio, Yasushi
PATENT ASSIGNEE(S): Sigma Genosys Japan Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004099532	A	20040402	JP 2002-264099	20020910

PRIORITY APPLN. INFO.: JP 2002-264099 20020910

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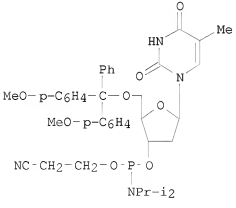

II

AB Oligonucleotides are prepared by phosphoramidite method using 1-hydroxybenzotriazole (I) as reaction promoter. Thus, thymidine

3'-O-phosphoramidite derivative II was coupled with 3'-O-(tert-butyldimethylsilyl)deoxyadenosine in the presence of I in MeCN at room temperature for 5 min and treated with iodine in aqueous pyridine at room temperature for 2 min to give 91% dinucleotide.

L8 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN
ED Entered STN: 16 Jan 2004
ACCESSION NUMBER: 2004:40030 CAPLUS
DOCUMENT NUMBER: 141:7178
TITLE: A new approach for pyrophosphate bond formation starting from phosphoramidite derivatives by use of 6-trifluoromethyl-1-hydroxybenzotriazole-mediated O-N phosphoryl migration
AUTHOR(S): Ohkubo, Akihiro; Aoki, Katsufumi; Seio, Kohji; Sekine, Mitsuo
CORPORATE SOURCE: Department of Life Science, Tokyo Institute of Technology, Midoriku, Yokohama, 226-8501, Japan
SOURCE: Tetrahedron Letters (2004), 45(5), 979-982
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:7178
AB A new method for pyrophosphate bond formation in the solid phase was developed using phosphoramidite derivs., which are readily converted by reaction with 6-trifluoromethyl-1-hydroxybenztriazole via an O-N phosphoryl rearrangement into pentavalent phosphotriester intermediates. These intermediates proved to react smoothly with not only phosphomonoesters but also phosphodiesters to give protected pyrophosphate derivs. which, in turn, could be easily deprotected to give the desired pyrophosphate derivs.
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN
ED Entered STN: 01 Jun 2003
ACCESSION NUMBER: 2003:417543 CAPLUS
DOCUMENT NUMBER: 139:1984
TITLE: Synthesis of oligonucleotides probes and their use in detection of nucleic acids and microarrays
INVENTOR(S): Bruce, Ian; Davies, Martin; Wolter, Andreas
PATENT ASSIGNEE(S): Proligo LLC, USA
SOURCE: PCT Int. Appl., 110 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003043402	A2	20030530	WO 2002-US33699	20021021
WO 2003043402	A3	20031106		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002366046	A1	20030610	AU 2002-366046		20021021
US 20030143591	A1	20030731	US 2002-278047		20021021
US 6902900	B2	20050607			
EP 1442142	A2	20040804	EP 2002-803599		20021021

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

US 20050233360	A1	20051020	US 2005-83210		20050316
PRIORITY APPLN. INFO.:			US 2001-336432P	P	20011019
			US 2002-278047	A3	20021021
			WO 2002-US33699	W	20021021

AB The invention comprises novel methods and strategies to detect and/or quantify nucleic acid analytes. The methods involve nucleic acid probes with covalently conjugated dyes, which are attached either at adjacent nucleotides or at the same nucleotide of the probe and novel linker mols. to attach the dyes to the probes. The nucleic acid probes generate a fluorescent signal upon hybridization to complementary nucleic acids based on the interaction of one of the attached dyes, which is either an intercalator or a DNA groove binder, with the formed double stranded DNA. The methods can be applied to a variety of applications including homogeneous assays, real-time PCR monitoring, transcription assays, expression anal. on nucleic acid microarrays and other microarray applications such as genotyping (SNP anal.). The methods further include pH-sensitive nucleic acid probes that provide switchable fluorescence signals that are triggered by a change in the pH of the medium.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN
ED Entered STN: 28 Jan 2001
ACCESSION NUMBER: 2001:64762 CAPLUS
DOCUMENT NUMBER: 134:252601
TITLE: New phosphoramidite reagents for the synthesis of oligonucleotides containing a cysteine residue useful in peptide conjugation
AUTHOR(S): Stetsenko, Dmitry A.; Gait, Michael J.
CORPORATE SOURCE: Laboratory of Molecular Biology, Medical Research Council, Cambridge, CB2 2QH, UK
SOURCE: Nucleosides, Nucleotides & Nucleic Acids (2000), 19(10-12), 1751-1764
CODEN: NNNAFY; ISSN: 1525-7770
PUBLISHER: Marcel Dekker, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 134:252601
AB The preparation is described of four 2-cyanoethyl-N,N-diisopropyl phosphoramidites of N-α-Fmoc-S-protected cysteine hydroxyalkyl amides. The phosphoramidites were used in solid-phase synthesis of 5'-cysteinyl oligonucleotides, useful intermediates in the preparation of peptide-oligonucleotide conjugates through reaction with a maleimide peptide or with a peptide thioester via "native ligation".
REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN
ED Entered STN: 18 May 1999
ACCESSION NUMBER: 1999:300484 CAPLUS

DOCUMENT NUMBER: 131:127347
TITLE: Bifunctional Phosphoramidite Reagents for the Introduction of Histidyl and Dihistidyl Residues into Oligonucleotides
AUTHOR(S): Smith, Thomas H.; LaTour, John V.; Bochkariov, Dmitry; Chaga, Grigoriy; Nelson, Paul S.
CORPORATE SOURCE: Nucleic Acids Chemistry Division, CLONTECH Laboratories Inc., Palo Alto, CA, 94303, USA
SOURCE: Bioconjugate Chemistry (1999), 10(4), 647-652
CODEN: BCCHES; ISSN: 1043-1802
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The synthesis and characterization of reagents for the incorporation of histidyl residues into oligonucleotides by automated chemical synthesis is described. Automated oligonucleotide synthesis utilizing a bifunctional reagent for the incorporation of a dihistidyl residue into oligonucleotides is described. Oligonucleotides incorporating one to three dihistidyl residues were prepared and characterized. The interaction of these oligonucleotides with a metal chelating IMAC matrix was explored.
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN
ED Entered STN: 15 Feb 1996
ACCESSION NUMBER: 1996:95023 CAPLUS
DOCUMENT NUMBER: 124:146750
ORIGINAL REFERENCE NO.: 124:27320h,27321a
TITLE: Preparation of 2-amino-2'-deoxyadenosine derivatives as monomer unit for synthesis of oligonucleotides or polynucleotides
INVENTOR(S): Sugyama, Hiroshi; Saito, Retsu; Hiramatsu, Mitsuo
PATENT ASSIGNEE(S): Hamamatsu Photonics Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07252293	A	19951003	JP 1994-79163	19940312
PRIORITY APPLN. INFO.:			JP 1994-79163	19940312

OTHER SOURCE(S): MARPAT 124:146750
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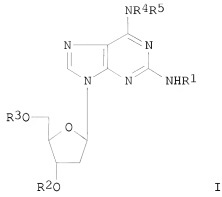
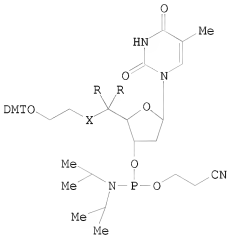


I

AB The title compds. [I; R1 = H, COCHMe2, COCH2OAr, wherein Ar = aryl; R2 = H, P(OCH2CH2CN)N(CHMe2)2; R3 = H, dimethoxytrityl; R4, R5 = H, :CHNR6R6; wherein R6 = alkyl, cycloalkyl, aryl, aralkyl], which are useful as intermediates for an oligonucleotide or a polynucleotide containing a plural number of 2-amino-2'-deoxyadenosine units with increased hydrogen bonding strength between the adenine and thymine residue and useful as antisense compds. or hybridization probes, are prepared Thus, I (R1 = R2 = R3 = isobutyryl, R4 = R5 = H) was stirred in 1 N NaOH (pyridine:MeOH:H2O = 65:30:5)at 0° for 10 min and neutralized with aqueous 5% aqueous NH4Cl to give 75.1% I (R1 = isobutyryl, R2 - R5 = H), which was alkylated by trityl chloride in the presence of Et3N and 4-dimethylaminopyridine in pyridine to the 5'-O-dimethoxytrityl compound (60.0%), saponified with 1 N NaOH (pyridine:MeOH:H2O = 65:30:5) to the 2-amino-2'-deoxyadenosine I [R1 = R2 = R4 = R5 = H, R3 = 4,4'-dimethoxytrityl (DMT)] (47.2%), and silylated by Me3SiCl in pyridine and acylated by phenoxyacetyl chloride in pyridine and 1-hydroxybenzotriazole in MeCN and pyridine to give I (R1 = R5 = COCH2OPh, R2 = R4 = H, R3 = DMT). The latter compound was stirred with a mixture of aqueous NH3, EtOH, and CH2Cl2 under cooling for 3-4 h to give 88.4% I (R1 = COCH2OPh, R2 = R4 = R5 = H, R3 = DMT), which was condensed with N,N-dibutylformamide di-Me acetal in pyridine at room temperature for 3 days to I (NR4R5 = N:CHNBu2, R1 = COCH2OPh, R2 = H, R3 = DMT) and then condensed with 2-cyanoethyl N,N-diisopropylchlorophosphoramidite in the presence of tetrazole in MeCN and pyridine to give 93.6% the title phosphoramidite I [NR4R5 = N:CHNBu2, R1 = COCH2OPh, R2 = P(OCH2CH2CN)N(CHMe2)2, R3 = DMT] (II). The latter compound II can be incorporated into an oligonucleotide or polynucleotide, and deprotected under normal deprotection condition (55° for 8 h) using 28% NH4OH whereas the conventional protective groups (e.g. benzoyl or isobutyryl) require a long reaction time (55° for 2-5 days) and result in a low yield of oligomers or DNA. For example, dimer d(2-amino-A)T (wherein 2-amino-A = 2-amino-2'-deoxyadenosine) was prepared by the solid phase method using an Applied Biosystems 381A automatic synthesizer and II. The 2-amino-A was completely deprotected by 28% NH4OH at 37° for 2 h.

L8 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN
ED Entered STN: 30 Apr 1994
ACCESSION NUMBER: 1994:218405 CAPLUS
DOCUMENT NUMBER: 120:218405
ORIGINAL REFERENCE NO.: 120:38817a,38820a
TITLE: Synthesis of triple helix forming oligonucleotides with a stretched phosphodiester backbone
AUTHOR(S): Rao, T. Sudhakar; Jayaraman, K.; Revankar, Ganapathi, R.

CORPORATE SOURCE: Triplex Pharm. Corp., The Woodlands, TX, 77380, USA
SOURCE: Tetrahedron Letters (1993), 34(39), 6189-92
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB Total syntheses of novel DMT-phosphoramidites of deoxyribonucleosides, e.g. I (R = H, X = S; RR = O, X = NH), and their utility in the preparation of triple helix forming oligodeoxyribonucleotides with a stretched phosphodiester backbone are described.

L8 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN
ED Entered STN: 13 Apr 1990
ACCESSION NUMBER: 1990:135575 CAPLUS
DOCUMENT NUMBER: 112:135575
ORIGINAL REFERENCE NO.: 112:22837a,22840a
TITLE: Preparation of oligonucleotide-polyamide conjugates and their use as hybridization probes
INVENTOR(S): Haralambidis, Jim; Tregear, Geoffrey William
PATENT ASSIGNEE(S): Florey, Howard, Institute of Experimental Physiology and Medicine, Australia
SOURCE: PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8903849	A1	19890505	WO 1988-AU417	19881025
W: AU, JP, US				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
AU 8826006	A	19890523	AU 1988-26006	19881025
AU 621572	B2	19920319		
EP 383803	A1	19900829	EP 1988-909271	19881025
EP 383803	B1	20000503		

R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE

JP 03500773	T	19910221	JP 1988-508563		19881025
EP 972779	A2	20000119	EP 1999-114825		19881025
EP 972779	A3	20041020			

R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE

AT 192465	T	20000515	AT 1988-909271		19881025
CA 1339205	C	19970805	CA 1988-581421		19881027
US 5525465	A	19960611	US 1995-367904		19950103
US 5677440	A	19971014	US 1996-599193		19960209
JP 09124693	A	19970513	JP 1996-203613		19960801
JP 3119171	B2	20001218			
US 5846728	A	19981208	US 1997-958885		19971027

PRIORITY APPLN. INFO.:	AU 1987-5111	A	19871028
	EP 1988-909271	A3	19881025
	JP 1988-508563	A3	19881025
	WO 1988-AU417	A	19881025
	US 1990-477995	B1	19900716
	US 1993-162789	B1	19931206
	US 1995-367904	A3	19950103
	US 1996-598963	A1	19960209

AB The title conjugates, of formula X-L-Y (X is a polyamide; Y is an oligonucleotide; L is a linker), are provided; L forms a covalent bond with the amino-terminus of X and the 3'-phosphate of Y. Methods employing the conjugates as hybridization probes are also described. The conjugates may be synthesized with solid-phase synthesis methodol.; ≥1 reporter groups, e.g. biotin, may be added at different stages in the synthesis. 4-Nitrophenyl 3-[6-(4,4'-dimethoxytrityloxy)-hexylcarbamoyl]propanoate (I) was prepared in 64% yield by reacting succinic anhydride and 6-aminohexanol with 4,4'-dimethoxytrityl chloride, then reacting the product with p-nitrophenol. The peptide (Ala-Lys)5-Ala was synthesized on derivatized controlled pore glass (CPG). The terminal amino group was deprotected and the CPG product was reacted with I and 1-hydroxybenzotriazole. Following acetylation of residual amino groups and removal of protecting groups from the linker, oligonucleotide synthesis was commenced using Me N,N'-diisopropyl nucleoside phosphoramidites through production of a 30-mer complementary to a portion of mRNA encoding mouse kallikrein. The average coupling yield, by trityl assay, was >99%. Another probe, containing the same oligonucleotide but a different linker, a polyamide containing both natural and synthetic amino acids, and 10 biotin groups, was used to detect kallikrein mRNA in a 6 μm histochem. section of mouse submandibular gland. The probe strongly labeled distinct regions of the submandibular gland corresponding to the granular convoluted tubes, which are the site of expression of the majority of mouse kallikrein genes.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN

ED Entered STN: 11 Jan 1987
ACCESSION NUMBER: 1987:2511 CAPLUS
DOCUMENT NUMBER: 106:2511
ORIGINAL REFERENCE NO.: 106:491a,494a
TITLE: Efficient methods for attaching non-radioactive labels to the 5' ends of synthetic oligodeoxyribonucleotides
AUTHOR(S): Agrawal, Sudhir; Christodoulou, Chris; Gait, Michael J.
CORPORATE SOURCE: Lab. Mol. Biol., MRC, Cambridge, CB2 2QH, UK
SOURCE: Nucleic Acids Research (1986), 14(15), 6227-45
CODEN: NARHAD; ISSN: 0305-1048
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The syntheses are described of 2 types of linker mol. useful for the specific attachment of nonradioactive labels such as biotin and fluorophores to the 5' terminus of synthetic oligodeoxyribonucleotides. The linkers are designed such that they can be coupled to the oligonucleotide as a final step in solid-phase synthesis by using com. DNA synthesis machines. Increased sensitivity of biotin detection was possible with an antibiotin hybridoma/peroxidase detection system.

L8 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN
ED Entered STN: 01 Sep 1984
ACCESSION NUMBER: 1984:473047 CAPLUS
DOCUMENT NUMBER: 101:73047
ORIGINAL REFERENCE NO.: 101:11281a,11284a
TITLE: Use of 2-methylsulfonylethyl as a phosphorus protecting group in oligonucleotide synthesis via a phosphite triester approach
AUTHOR(S): Claesen, C.; Tesser, G. I.; Dreef, C. E.; Marugg, J. E.; Van der Marel, G. A.; Van Boom, J. H.
CORPORATE SOURCE: Dep. Chem., Univ. Nijmegen, Nijmegen, 6525 ED, Neth.
SOURCE: Tetrahedron Letters (1984), 25(12), 1307-10
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: English
AB MeSO2CH2CH2OPC12 was converted into the mono-N-morpholino derivative and applied for the preparation of 5'-O,N-protected deoxynucleoside-3'-phosphoramidites. The latter intermediates were used in the presence of 1-hydroxybenzotriazole for the formation of 3'-5'-phosphotriester linkages. The 2-methylsulfonylethyl protecting group was removed selectively and rapidly under mild basic conditions.

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(FILE 'HOME' ENTERED AT 17:25:54 ON 27 MAR 2009)

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L1 STRUCTURE UPLOADED
L2 9 S L1 SSS SAM
L3 4331 S L1 SSS FULL

FILE 'CAPLUS' ENTERED AT 17:27:41 ON 27 MAR 2009
L4 763 S L3
L5 3 S L4 AND PHOSPHORAMIDIT?
L6 0 S HYDROXYBENZOTRIAZOLE-1-OL
L7 3848 S HYDROXYBENZOTRIAZOLE
L8 14 S L7 AND PHOSPHORAMIDIT?